

Virginia Division of Consolidated Laboratory Services

**Diquat and Paraquat in Drinking Water by Liquid-Solid Extraction and HPLC/UV  
EPA 549.2 Revision 1 June 1997**

Facility Name: \_\_\_\_\_ VELAP ID: \_\_\_\_\_

Assessor Name: \_\_\_\_\_ Analyst Name: \_\_\_\_\_ Inspection Date: \_\_\_\_\_

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
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Records Examined: SOP Number/ Revision/ Date \_\_\_\_\_ Analyst: \_\_\_\_\_

Sample ID: \_\_\_\_\_ Date of Sample Preparation: \_\_\_\_\_ Date of Analysis: \_\_\_\_\_

Are samples collected in PVC or amber bottle with Teflon lined stop?	6.1				
Is NaHSO <sub>4</sub> added if residual chlorine is present?	8.3				
Is pH adjusted to <2 with H <sub>2</sub> SO <sub>4</sub> if biologically active?	8.3				
Are samples extracted within 7 days and analysis completed in 21 days?	8.4				
Was laboratory glassware dried at 130 C or rinsed with methanol?	4.1.1				
Is HPLC grade MeOH used?	7.2				
Are stock salts of standards heated at 110 C for 3 hours until constant weight is obtained?	7.15.2				
Is mobile phase prepared as 13.5 mL H <sub>3</sub> PO <sub>4</sub> , 10.3 mL diethylamine, 3 g of 1-hexanesulfonic acid, sodium salt in 1 liter of water?	7.16				
Is detection of Diquat at 308 nm and Paraquat at 257 nm?	6.5.5				
Were at least 3 initial calibration standards used which have been prepared using the cleanup procedure?	10.2				
Is calibration check standard within 20%?	10.4				
Was MDL 3 to 5 times the signal-noise level?	9.3.3				
Were IDCs analyzed at 100 ug/L with an average recovery within 30 % and variation within 30% RSD?	9.3.1 - 9.3.2				
Are IDCs repeated with column type, column condition, and detector changes?	9.4				

Notes/Comments:

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Are LFBs at a concentration of 10 times the MDL?	9.5.1				
Are control limits determined using most recent 20-30 data points and limits < those listed in the method?	9.5.2				
Are MS analyzed at 10% frequency?	9.6.1				
Are MS recoveries compared to limits in 9.5.2?	9.6.2				
Is cleanup of samples performed? If cleanup needed, is cartridge of disk extraction used and solid phase is C-8?	11.1				
Is confirmation procedure performed if analyte identification is in question?	11.4.3				
Notes/Comments:					